

# **BARRIERS TO HEALTH CARE ACCESS AMONG AMERICAN INDIAN AND ALASKA NATIVE POPULATIONS**

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BS, University of Pittsburgh, 2008

Submitted to the Graduate Faculty of  
Graduate School of Public Health in partial fulfillment  
of the requirements for the degree of  
Master of Public Health

University of Pittsburgh

2010

UNIVERSITY OF PITTSBURGH

Graduate School of Public Health

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# BARRIERS TO HEALTH CARE ACCESS AMONG AMERICAN INDIAN AND ALASKA NATIVE POPULATIONS

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University of Pittsburgh, 2010

American Indian and Alaska Native (AIAN) populations suffer significant disparities in health status while also experiencing multiple barriers related to accessing health care services. Since increasing health care access was listed as a goal of *Healthy People 2010*, there is public health significance in identifying health care access barriers among AIAN populations and relating these barriers to health disparities. Most of the research surrounding AIAN health issues focuses on the prevalence and treatment of specific diseases. Another area of research is the accessibility of health care services to the AIAN population. However, very little of the research in either of these fields has progressed beyond simply identifying health status or health care access disparities. Additionally, many of the health statistics attributed to this population have been found to be inaccurate or deficient through incomplete data collection and racial misclassification on medical records. Given the significant health disparities that do exist, as well as those additional disparities hypothesized from incomplete data, the underlying causes of health disparities in the AIAN population must be recognized. By examining the most common barriers to health care access and relating these barriers to the current health status of many AIAN populations, this thesis contends that there can be greater understanding of the causes of health disparities within AIAN populations and illuminates possible points of intervention to improve health care access.

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## **PREFACE**

Several abbreviations are used throughout this thesis. All of the abbreviations used are commonly accepted and utilized in related academic literature. For ease of access, a glossary of terms is provided below.

### **GLOSSARY OF TERMS**

AIAN-American Indian and Alaska Native

CDC-Center for Disease Control

CHS-Contract Health Services

IHS-Indian Health Service

MOU-Memorandum of Understanding

NSAF-National Survey of American Families

PTSD-Post-Traumatic Stress Disorder

SAIAN-Survey of American Indians and Alaska Natives

SCI-Service Connected Injury/Illness

VHA-Veterans' Health Administration

## **1.0 BACKGROUND**

### **1.1 INTRODUCTION**

In the United States, approximately 4.1 million people, or 1% of the population, claims some form of American Indian or Alaska Native (AIAN) heritage (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). Over one-half (54%) of the national AIAN population lives in only five states: Oklahoma, Arizona, New Mexico, Alaska, and North Carolina (Probst, Moore, Glover, & Samuels, 2004). There are currently 562 federally recognized AIAN tribes, with additional tribes acknowledged on the state level and even more groups currently working to gain recognition (Kramer et al., 2009b). Given the small size of this U.S. sub-population, it is often forgotten that the health status of AIAN persons is significantly lower than that of the larger U.S. population. According to the Center for Disease Control (CDC), the top five causes of death in the AIAN population are heart disease, cancer, unintentional injuries, diabetes, and chronic liver disease (CDC, 2010). Other health issues of high prevalence include obesity, infant mortality, mental health, and substance abuse (CDC, 2010). Fair to poor health status is reported to be twice as high (16%) among AIAN populations as among non-Hispanic whites (8%) (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). Additionally, 20% of AIAN report functional limitations due to health issues as opposed to 12% of the white population (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). Socio-economic status, a significant contributor to health status, further

widens the gap between AIAN and white populations. Fifty-five percent of AIANs live with an annual income that is less than 200% of the nationally recognized poverty level, while only 25% of whites live below this line (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). According to the National Survey of American Families (NSAF), AIAN populations are younger, less educated, and poorer than their white counterparts (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). In order to address the specific health needs of the national AIAN population, the Indian Health Service (IHS) was formed. Since the IHS was placed under the Public Health Service in 1955, there have been marked improvements in AIAN health status (Cunningham, 1993). However, as shown by current health statistics, AIAN health still falls well below the health status of white Americans. A significant cause of the decreased health status of AIAN populations is the multiple barriers to health care access experienced by members of this racial group.

## **1.2 PURPOSE**

This thesis will examine the barriers that currently exist for AIAN populations when accessing health care, with a focus on how these barriers contribute to the health disparities experienced by AIAN populations. In order to recognize the barriers that exist, one must first understand the complex system through which most AIANs seek health care services. This paper will provide an overview of the IHS and how it contributes, both directly and indirectly, to the health care access of AIAN populations. There will also be additional exploration of health care access barriers faced by specific AIAN sub-populations, including veterans and rural and urban residents. Through exploration of these barriers within the context of a social-ecological system,

suggestions for change and points of intervention at various levels will be proposed in order to reduce the health care disparities currently experienced by the AIAN population nationwide.

### **1.3 DEFINITION OF HEALTH CARE ACCESS**

For the purposes of this paper, health care access will be defined by the ability to receive regular and adequate medical treatment for any given health need. Access to Quality Health Care is listed as the first goal by Healthy People 2010. For the purposes of its work, Health People 2010 used the Institute of Medicine's definition of access: "the timely use of personal health services to achieve the best possible health outcomes." (U.S. Dept. of Health and Human Services, 2000) This definition is quite broad, but would encompass the discussions of access contained in this paper. This 'ability' will be examined as it relates to both personal and organizational resources and cooperation necessary for the receipt of medical care. It is acknowledged that many sources use the terms 'access' and 'utilization' interchangeably, but for the purpose of this thesis, these terms will be recognized as two separate, though inter-related, topics. Any issues of utilization discussed herein will be examined as consequences of inadequate provision of health care services at reasonable cost, distance, and frequency to meet the needs of the AIAN population of any given region. Comparisons of acceptable levels of access will most often be based either on the general U.S. population or on the white population. In some cases, the comparison statistic is the health status average for the entire U.S. population, while in other cases, the health status of the white population is used as the baseline comparison. It will be made apparent which population baseline is being used for any comparison statistics.

## **1.4 DEFINITION OF AMERICAN INDIAN AND ALASKA NATIVE**

If one is to understand health care access barriers experienced by the AIAN population, it is necessary to understand who is classified as AIAN. For the purposes of the IHS, AIAN patients are those who have been identified as members of a federally-recognized tribe, thus making them eligible for IHS health services (Kramer et al., 2009b). Such designations are at the discretion of each individual tribe, with significant variations in eligibility requirements between different tribes (Cunningham, 1993; Trafzer & Weiner, 2001). For census data, AIAN is a self-identified designation, leading to much less stringent definitions of who is classified as AIAN (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). At non-IHS health facilities, racial classification may be at the discretion of individual patients or medical providers depending on who submits this information for medical records (Burhansstipanov, 2000; Grossman, Krieger, Sugarman, & Forquera, 1994; Korenbrot, Ehlers, & Crouch, 2003; Sugarman & Grossman, 1996). Given the variability in definition, it is easy to understand the difficulty that faces researchers and practitioners in trying to understand health disparities among this population. Except when otherwise stated, in this thesis, AIAN will be used in the broadest definition as those who self-identify as AIAN.

## **1.5 METHODS**

For this paper, multiple searches were performed using professional literature search engines including PubMed and Scopus, with a focus on medical and social science literature. The searches using these databases were conducted in January 2010, with additional directed

searches taking place through April 2010. In order to discover literature using alternate terms, searches used various combinations of the following terminology: Native American, American Indian, AIAN, health care, medical care, health, access, utilization, disparities, and barriers. Even in searches that simply defined the population and health, it was common to find less than 200 articles dating back to approximately 1970. Of these, most articles discussed the prevalence and interventional treatment of specific diseases, or focused on the cultural and ethical considerations of working among AIAN populations; two of the most common disease focuses were diabetes and various forms of cancer. When multiple articles were found to discuss the same disease, two or three representative articles were chosen to illuminate diseases of interest with this population. However, as the focus of this thesis is health care access and not the prevalence or treatment of singular diseases, the majority of disease-specific articles were not used. Additional sources were identified through the citations of various publications, including citations from the first set of articles identified through PubMed and Scopus. Other sources of literature included previously identified papers that the author had utilized in research experiences before January 2010 and had recognized as relevant to the topic of this thesis. Finally, a search was conducted for publications by the few authors who were well-represented in the field, including D.C. Grossman, L.M. Baldwin, and J.R. Sugarman; this yielded approximately four additional articles that had been previously unidentified and were relevant to the topic of this paper. As the thesis was written, a few articles were specifically sought out as references, particularly articles related to theory or larger public health concepts.

## **1.6 LIMITATIONS OF THE LITERATURE**

Literature concerning the health care needs of the AIAN population is severely limited in both quantity and scope. Most literature continues to focus on defining the health status disparities that exist for AIAN populations or describing specific interventions developed to treat one health issue within one small population sample. Little work seems to exist that examines the larger complexities of health care access as it contributes to the disparities that are being characterized. One significant cause of such limited research may be the incomplete data that exists for AIAN populations. Health status reports on the AIAN population nationwide are almost exclusively produced by the IHS (Grossman, Krieger, Sugarman, & Forquera, 1994). However, the IHS only collects health indicator data in the regions where it provides services-in all or part of 35 states throughout the U.S. The main source of this data is medical records originating from IHS health clinics and hospitals (Baldwin et al., 2002). For AIANs who do not reside in these regions or who use health services outside of the IHS, data is rarely intentionally collected. The last major survey of AIAN health was the Survey of American Indians and Alaska Natives (SAIAN), conducted as part of the National Medical Expenditure Survey in 1987 (Cunningham, 1993; Cunningham & Cornelius, 1995). The SAIAN surveyed 6,500 AIAN individuals who were eligible for IHS care, characterizing the socioeconomic statistics of the population and examining both access and utilization of other, non-IHS sources of health care. This survey continues to be the largest and most comprehensive characterization of the AIAN population nationwide, particularly as it pertains to health care issues. Other sources of health data, such as the CDC or other health tracking systems, often provide incomplete or incorrect representations of AIAN health statistics due to racial misidentification; some studies have found that hospital records, death certificates, and other sources of health data misidentify AIAN individuals in as

much as one-third of all cases, leading to significant concerns about the misrepresentation of AIAN health status, particularly of those AIAN patients outside of IHS care (Baldwin et al., 2002; Burhansstipanov, 2000).

While greater tribal involvement in health care and research has empowered many AIAN communities to take control and rebuild their communities, it has also led to a significant decrease in outside research about AIAN health issues. Very little current literature exists that explores AIAN health issues in culturally competent ways while still maintaining a strong research base. Literature about AIAN populations tends to be presented in two different forms: 1) overviews of data from national surveys and other sources illuminate current health trends within the AIAN population without discussing causes or solutions to these issues, while 2) literature on specific sub-populations or diseases discusses the causes of one health issue without recognizing how this contributes to the larger patterns of health status and health care access seen throughout the AIAN population. An issue discussed by both types of literature is the barriers to health care access that exist within AIAN populations. By focusing on the issue of access from both the standpoint of barriers to care and the resultant effect on AIAN health trends, this thesis seeks to examine some of the underlying causes of health disparities among AIAN populations, moving beyond simply recognizing the existence of health issues and beginning to identify the causes of these disparities.



## **2.0 HEALTH CARE ACCESS FOR AIAN POPULATIONS**

### **2.1 THE EFFECT OF HEALTH CARE ACCESS ON DISPARITIES**

AIANs suffer morbidity and mortality rates far above other races (Sugarman & Grossman, 1996) and have a life expectancy 4.7 years less than U.S. whites (Korenbrod, Ehlers, & Crouch, 2003). Additionally, AIANs have an age-adjusted death rate 1 ½ times that of whites, leading to significant numbers of excess deaths in all age groups except those over 65 years old (Korenbrod, Ehlers, & Crouch, 2003). AIANs are more likely to have emergency room visits than whites; this has been correlated to AIANs having less access to community ambulatory care (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). A study conducted in Minnesota further illuminated some of the access disparities faced by AIAN populations as compared to their white counterparts (Call et al., 2006). All participants were enrolled in public health care programs in the state of Minnesota, and while both AIAN and whites reported barriers to care, AIAN reported significantly more barriers. In fact, “all but one of the barriers for which a significant difference exists, reveal greater likelihood of problems for [American Indians], and many of these differences are substantial” (Call et al., 2006). Some of these barriers included transportation, clinic hours, the demands of other responsibilities, and childcare needs. Surprisingly, few people reported language, cultural, and religious barriers, though most that did

were AIAN (Call et al., 2006). For both groups, economic discrimination was frequently perceived as a barrier to care, though racial and ethnic discrimination were rarely reported.

## **2.2 THE INDIAN HEALTH SERVICE**

### **2.2.1 Background**

Traditionally, the IHS has been acknowledged as the primary source of health care for most AIANs (Korenbrodt, Ehlers, & Crouch, 2003). The IHS was originally founded in 1921 under the Snyder Act, which called for the conservation of Indian health (Roubideaux, 2002). In 1955, the IHS was placed under the management of the Public Health Service, where it remains to this day (Cunningham, 1993). The Indian Self-Determination and Educational Assistance Act of 1975 increased tribal control of their health care by allowing tribes to manage health care programs that had previously been under the federally-run IHS (Roubideaux, 2002). While many tribes chose to take advantage of this option, others found the federal management of IHS services to be sufficient for their needs; by 1996, only 113 of the 492 ambulatory care facilities existing under the IHS were directly run by federal management instead of local tribes (Korenbrodt, Ehlers, & Crouch, 2003). Current statistics show that approximately one-half of all health care provided through the IHS falls under tribe-managed programs (Roubideaux, 2002). The Indian Health Care Improvement Act Amendments of 1988 further empowered the IHS by allowing the system to seek reimbursement from private insurance carriers for covered services. The same amendments also authorized the IHS to seek reimbursement from Medicaid and Medicare for patients enrolled under these other federal programs (Cunningham, 1993).

### **2.2.2 Services Provided by the Indian Health Service**

The IHS exists to “assure comprehensive health service delivery systems for American Indians and Alaska Natives with maximum tribal involvement” (Lythcott, 1978). By IHS standards, health care includes ambulatory visits, inpatient stays, dental care, prescription drug coverage, home health care, and other medical expenses (Cunningham, 1993). The IHS strives to provide holistic care, including preventative, curative, and rehabilitative care, as well as environmental and social services and staff training (Lythcott, 1978). While the IHS was intended to provide supplemental services above and beyond an individual’s private health coverage, the program has become the dominant provider of health care for most eligible members, with 60% of AIANs nationwide using some IHS services (Korenbrodt, Ehlers, & Crouch, 2003). In fact, a substantial number of patients receiving ambulatory care from IHS providers also possessed third-party health coverage (Cunningham, 1993). It should be noted that the IHS does not serve as a form of health insurance, but rather as a source of health care that can be utilized only at IHS clinics. At IHS clinics, eligible patients receive care at no charge, including no co-payments or other supplementary forms of payment. However, outside of the IHS network, eligible patients usually will not receive any coverage of health care costs from the IHS; the one exception to this lack of coverage being the use of Contract Health Services, as explained below (Baldwin et al., 2008). Eligibility for IHS care is determined by membership in a federally recognized tribe. While many U.S. citizens claim AIAN ethnicity, individuals must have documented membership in one of the 562 federally recognized tribes (Kramer et al., 2009b) in order to receive IHS health services; the IHS currently serves about 1.5 million people (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). Each tribe has its own standards for membership, with some tribes requiring as much as one-quarter or one-half blood quotient (i.e.-a parent or grandparent must be

a full-blooded member of the tribe) and others requiring as little as 1/32 blood quotient in order to be an official member (Trafzer & Weiner, 2001). Some tribes have additional requirements related to residency being on or near designated reservation lands (Cunningham, 1993).

### **2.2.3 Funding the Indian Health Service**

As a program under the U.S. Department of Health and Human Services, the IHS receives its annual budget allocation from Congress (Cunningham, 1993). Unlike Medicare and Medicaid, IHS care is not a federal health entitlement program (Cunningham & Cornelius, 1995). Due to this difference, patients receiving IHS care do not have a legally enforceable right to all services covered under the program. For this reason, IHS care may not be guaranteed due to budgetary restrictions, particularly for expensive or specialty care, or during the later months of the fiscal year when funds may be low (Cunningham & Cornelius, 1995). Funding for the IHS has not kept pace with medical inflation, leading to a decrease in the per capita funds available for the AIAN population (Baldwin et al., 2008). Funding for personal medical care through the IHS is only 60% of the federal benchmark, even when including the contributions of Medicare and Medicaid reimbursements (Korenbrodt, Ehlers, & Crouch, 2003). In 2002, the federal budget for all IHS programs, including those which were tribally-managed, was \$2.8 billion (Roubideaux, 2002). However, many tribal leaders estimate that if the IHS received allocations on a needs-based system, the annual budget should be at least \$18 billion (Roubideaux, 2002). While current allocations are ostensibly based on the provision of IHS services per capita, in 2001, expenditure for Indian health care was one-third the U.S. average per capita health care expenditure (Roubideaux, 2002). The estimated annual per capita spending through the IHS is \$1,914, which

is less than half of the per capita spending under Medicaid, and \$3,151 per year less than the overall U.S. per capita medical spending (Baldwin et al., 2008).

#### **2.2.4 Indian Health Service Facilities**

Little has changed in the expansion of IHS service locations in the past few decades. The IHS currently provides health care in the 35 U.S. states with reservation lands, and has hospitals in 13 of these states (Kramer et al., 2009a). The country is split into 88 service units, which manage a total of 51 hospitals, 99 health centers, 300 satellite clinics, and over 9,000 staff members (Lythcott, 1978). To provide care for eligible members who do not reside close enough to an IHS facility and to expand specialty services, the IHS contracts with 300 additional hospitals and 800 private physicians, as well as 300 dentists and 350 other health providers (Lythcott, 1978). Part of the budget for each IHS service unit goes towards Contract Health Services (CHS), which pay for patient care at non-IHS facilities when necessary services are not available through the local IHS providers. CHS provisions are often difficult to obtain due to the tight budgets, and these services are usually the first to become unavailable throughout the duration of the fiscal year. Some patients choose to wait until the next budgetary cycle in order to receive care through CHS, while others must find alternative means of paying for specialty care (Baldwin et al., 2008).

#### **2.2.5 Facility Management**

As previously mentioned, some tribes choose to manage their own health care system within the budget provided by the federal IHS, other groups opt to participate under the federal program,

and many tribal communities choose some level of involvement in health care provision between the two extremes (Roubideaux, 2002). A recent survey showed that tribe-managed health care systems, which currently comprise about one-half of the IHS, were better able to work within their budget to provide new programs and facilities, as well as collect more third-party reimbursements, than their federally-managed IHS counterparts (Roubideaux, 2002). Additional support of the movement towards tribe-managed care comes from the efforts to re-learn traditional tribal health practices and increase the proportion of AIAN doctors, presumably increasing the cultural competence of care (Roubideaux, 2002).

## **2.3 ACCESS TO CARE IN THE INDIAN HEALTH SERVICE**

### **2.3.1 Disparities in Care within the Indian Health Service**

Even within the IHS system, there are disparities in quality and accessibility of care. Allocations disparities are common, as much of the IHS funding is distributed due to historical precedence instead of considering the current needs of the population (Cunningham & Cornelius, 1995). The IHS also has difficulty retaining staff due to the fact that many providers are initially hired through loan repayment programs such as the National Health Service Corps, and leave for more populous regions or more lucrative positions after their service commitments have been fulfilled (Cunningham & Cornelius, 1995). This continuous staff turnover, particularly of younger, less experienced providers, increases the challenge of providing quality, culturally competent care to patients. Other studies have shown deficiencies in preventative care through the IHS, leading to greater long-term health demands for the patients of these clinics (Zuckerman, Haley,

Roubideaux, & Lillie-Blanton, 2004). AIAN populations receiving IHS care also are more likely to report poor communication with their providers (26% as opposed to 17% among white populations) and report a lack of confidence in their access to care and a dissatisfaction in the quality of the care they receive (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004).

### **2.3.2 Income Barriers**

There are notable differences in the demographics of the AIAN and white populations such as average age (the AIAN is significantly younger) and geographical dispersion (the majority of the AIAN population lives in only five U.S. states); by adjusting for such factors, true differences in health care access are better recognized (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). One demographic that arguably should not be adjusted for is income, as this often has a direct relationship to overall health and health care access and AIANs as a racial group have much lower per capita incomes than whites (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). When adjusting for all factors except income, there are still statistically significant differences in reported health care access between AIANs and whites (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). Despite the work of the IHS, many AIANs still report low levels of use of ambulatory care and health care coverage, often related to family income levels and use of non-IHS services (Cunningham & Cornelius, 1995). While the IHS significantly increases access to and utilization of health care services among what would otherwise be a largely uninsured population, significant health disparities still exist (Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). Less than one-half of low-income otherwise uninsured AIANs report even having access to IHS services. Despite the existence of the IHS, national AIAN uninsured rates are higher than African Americans and comparable to Hispanics

(Zuckerman, Haley, Roubideaux, & Lillie-Blanton, 2004). One of the most common IHS eligible populations are those who are employed part-time; these individuals often have no choice but to use IHS care. Additionally, because most part-time employees do not receive private health insurance coverage from their employers but make too much money to receive other sources of public aid, they are unable to obtain a regular source of health insurance (Cunningham, 1993). While the IHS provides health care to a significant number of individuals that would be otherwise uninsured due to income, the current system does not allow such patients to have a choice in their health care source, nor does it guarantee health care services to all uninsured individuals.

### **2.3.3 Geographical Barriers**

Geography and population distribution also play roles in decreased access among IHS users. The average population density of rural IHS-eligible regions is one-third that of other U.S. rural areas; regardless of primary health care source, AIANs in non-metropolitan areas have significantly fewer visits to health providers than their metropolitan counterparts (Cunningham & Cornelius, 1995). Public and private transportation are often unavailable in these areas, and given the low income levels of most residents, procuring transportation to IHS services can be a significant burden (Cunningham & Cornelius, 1995). The average travel time to health care services is 60% longer for IHS eligible patients than for the average U.S. population. When the patients lived in a region designated as a health manpower shortage region, travel time increased by 80%; those who lived in such regions were less likely to use ambulatory care than their counterparts in non-shortage areas (Cunningham & Cornelius, 1995). Currently, 92% of IHS services are located in such health manpower shortage areas. This is especially concerning



because the proximity to and use of ambulatory services decreases the rate of hospitalizations (Cunningham & Cornelius, 1995). When an IHS hospital was available in the same county as residence, travel time to health services decreased by 45.1%, and utilization of all types of IHS care increased by 16.8%. Such patients were also twice as likely to use IHS care as those with no IHS hospital in the county (Cunningham & Cornelius, 1995). Given the clustered distribution of IHS services, the system could not be adequately replaced by a shift to guaranteed private care; due to the dominance of IHS services in such regions, few private providers are willing or able to maintain a medical practice. This not only reduces the available options for residents but also leads to significant care shortages during periods when the local IHS clinics are under-funded and other sources of care are nonexistent (Cunningham & Cornelius, 1995).

#### **2.3.4 Funding Disparities**

In 1987, the National Medical Expenditure Survey was conducted, which included the Survey of American Indians and Alaska Natives (SAIAN). The SAIAN surveyed 6,500 IHS eligible individuals on their health care access and health status, both through the IHS and external sources, and to this day, remains the most comprehensive survey of AIAN individuals about health care access issues (Cunningham, 1993; Cunningham & Cornelius, 1995). Of the SAIAN population, 82% reported using some form of health care during the year 1987 (as opposed to 85% of the U.S. population); 59% reported that the IHS was their only source of health care for at least part of the year. Unsurprisingly, 85% of the elderly were found to have other health coverage, most likely through other federal programs (Cunningham, 1993). In 1987, 80.2% of the U.S. population reported having private health insurance, while only 36.1% of the SAIAN population had private insurance at any point during that year (Cunningham & Cornelius, 1995).

Even though every individual surveyed under SAIAN was officially covered under the IHS, individuals were more likely to access health care in any form if they also had some other type of health coverage (Cunningham, 1993). While 60% of the adults in the survey were employed at some point during the year, most were not employed full-time or were not employed for the entire year. Over one-third of the SAIAN households lived below the federal poverty line, and an additional 31% were classified as having low income (Cunningham, 1993). Within the SAIAN population, more than two-thirds of those living in the most sparsely populated rural regions relied exclusively on IHS services, as opposed to less than one-quarter of those living in urban areas (Cunningham, 1993). Such differences in utilization between urban and rural AIAN populations imply deeper underlying differences between the two groups, and suggest that the two groups should be characterized separately when examining health status indicators and health care access.

### **3.0 RURAL AIAN POPULATIONS**

#### **3.1 INTRODUCTION TO RURAL AIAN POPULATIONS**

The rural AIAN population provides a more traditional view of the living circumstances of AIANs nationwide. Due to the concentrations of AIANs in and around reservation lands, most IHS clinics and services focus on these regions. However, in these rural areas, poverty, decreased resources, and lack of transportation all influence patients' abilities to reach IHS clinics. Meanwhile, when specialty care is required, IHS referrals often send patients to larger, contracted hospitals in urban areas, significantly far away from the patient's home and family. For individual patients from the tight-knit communities that serve as the center of tribal culture in many rural regions, travelling to a distant region to receive specialty care causes a significant loss in the community support systems one would typically rely on during times of need (Cunningham & Cornelius, 1995). Additionally, patients who are referred to such hospitals must also find a way to actually reach that care. This can be a significant challenge for patients who do not own a car, as public transportation is almost never available in these rural regions, and the low average household incomes preclude patients from easily procuring transportation through other means (Cunningham & Cornelius, 1995).

### **3.2 SOCIO-ECONOMIC DISPARITIES AMONG RURAL AIAN POPULATIONS**

Of the 55 million United States citizens classified as living in rural areas, approximately 870,000 are AIAN (Probst, Moore, Glover, & Samuels, 2004). However, rural AIAN populations suffer from a variety of disparities compared to their white rural counterparts. In 1999, 30% of the rural AIAN population lived in poverty, and 48% worked in high-poverty job classifications, an indication of long-term poverty (Probst, Moore, Glover, & Samuels, 2004). High-poverty jobs are those in which an individual is unlikely to earn enough money to live above income-based poverty levels (Probst, Moore, Glover, & Samuels, 2004). Only 22% of rural AIAN children have a source of private health insurance, as opposed to 71% of rural white children (Probst, Moore, Glover, & Samuels, 2004). Despite the fact that most IHS services are concentrated in rural AIAN communities, these regions have worse health statuses than some urban AIAN populations due to greater travel distances and high poverty making access to services difficult (Baldwin et al., 2002). Additionally, 92% of the counties with an AIAN majority population, all of which are rural, are classified as health professional shortage areas, as opposed to 65% of all rural counties nationally (Probst, Moore, Glover, & Samuels, 2004). Approximately one-third of rural AIANs over the age of 25 do not possess a high school diploma, and the entire population of rural AIANs is more socioeconomically disadvantaged than the urban AIAN population (Grossman, Krieger, Sugarman, & Forquera, 1994). The poor education and socioeconomic status of such communities is significant, as economic development of some rural AIAN communities has been shown to be sufficient to improve health status of the overall community (Probst, Moore, Glover, & Samuels, 2004). Compared to urban AIAN populations, rural AIANs are less likely to have a source of insurance other than the IHS, less likely to use health services,

and more likely to travel long distances to reach their usual source of medical care (Baldwin et al., 2008).

### **3.3 IHS SERVICES AMONG RURAL AIAN POPULATIONS**

Despite the disadvantages faced by rural AIAN populations, due to a combination of funding allocations and tribal politics, most IHS activities and eligibilities are restricted to those regions on or near reservation lands, nearly all of which are rural (Grossman, Krieger, Sugarman, & Forquera, 1994). The success of the IHS presence in these regions is evidenced by the fact that those AIANs who list the IHS as their only source of ‘insurance’ or health care are as likely as insured Hispanics to use primary care services (Baldwin et al., 2008). Moreover, studies have shown that those AIANs living on or near reservation lands had higher rates of a usual source of ambulatory care than the general U.S. population (Korenbrodt, Ehlers, & Crouch, 2003). Unfortunately, this same population reports difficulty in accessing specialty care services due to CHS limitations and a lack of other sources of health insurance (Baldwin et al., 2008). In fact, over 80% of rural IHS providers reported insufficient CHS funds for specialty care, particularly among patients who were otherwise uninsured. One study in New Mexico and Montana found that providers reported that access to non-emergent specialty care services was fair to poor for their rural AIAN patients (Baldwin et al., 2008). The most common referrals for specialty care among rural AIAN populations are orthopedics, cardiology, general surgery, and OB/GYN services (Baldwin et al., 2008). Despite a lack of specialty medical services, another positive result of IHS care in rural areas has been the holistic approach to medicine: non-physician

services such as mental health and social services are better available for the rural AIAN population than for other rural populations (Baldwin et al., 2008).

While access to primary care services through the IHS has given rural AIAN populations significant advantages over other rural populations, lack of funding and specialty services has been a significant disadvantage, especially considering the high rates of uninsured patients. Studies have concluded that additional resources, particularly funding for CHS spending, is need to extend the current IHS provisions for rural populations (Korenbrot, Ehlers, & Crouch, 2003).

## **4.0 URBAN AIAN POPULATIONS**

### **4.1 HISTORY OF URBAN AIAN POPULATIONS**

As with the formation of the IHS, there is a historical precedence to the large numbers of AIANs who live in urban areas. The U.S. government has been described as undergoing five different stages in its policy towards AIAN populations (Burhansstipanov, 2000). The first stage, Removal, was the intentional killings of AIANs during the 17<sup>th</sup> and early 18<sup>th</sup> centuries. After this, there was the period of the Reservation, when AIAN tribes were first assigned and restricted to reservation lands. By the 1930s, the third stage, Reorganization, occurred, a period of eased regulation concerning cultural identity when many tribes made efforts to restore cultural traditions and identity. However, in the 1950s and 1960s, the Termination stage caused the attempted integration of AIANs into the larger American society through cultural repression and removal of large numbers of AIANs from reservation communities. The U.S. Government is now said to be in the Self-Determination stage, allowing AIAN tribes to self-govern and regain once repressed cultural practices (Burhansstipanov, 2000).

The Termination stage of the 1950s and 1960s was a significant contributor to the rise in urban AIAN populations. While trying to break up tribal structure, the government relocated many AIANs to urban areas, but intentionally avoided relocating large numbers of the same tribal group to the same regions (Burhansstipanov, 2000). This has led not only to the high

numbers of tribes represented in any given urban region, but also to the lack of tribal identity that seems to be experienced by many urban AIANs (Burhansstipanov, 2000). Many of the urban areas first used for relocation, including Los Angeles, CA, Denver, CO, Seattle, WA, and New York, NY, all still contain some of the nation's largest urban AIAN populations (Burhansstipanov, 2000). Aside from the forced relocations during the Termination period, many AIANs have had other reasons to migrate to urban areas. For soldiers returning from World War II, urban locations offered the chance for education or better employment, a trend that continues today among young AIANs who move to urban areas for education or job-related reasons (Burhansstipanov, 2000). Additionally, some AIANs choose to remain in urban areas due to personal preference or when they develop relationships with non-AIANs who do not wish to live in the remote regions where most reservation communities are located (Burhansstipanov, 2000). Unlike the rural AIAN population, urban AIANs can rarely be characterized by tribal cultures or belief systems. Many second-generation urban AIANs, the descendants World War II veterans or those relocated during Termination, may not follow any specific tribal tradition or be registered with their tribe of origin. Other first generation urban AIAN may still closely follow tribal practices, or migrate back and forth between urban and reservation regions in order to utilize the best health, education, and social resources each area has to offer (Burhansstipanov, 2000).

## **4.2 IHS SERVICES IN URBAN REGIONS**

According to census statistics, 56% of the nation's AIAN population now resides in urban areas (Baldwin et al., 2002; Grossman, Krieger, Sugarman, & Forquera, 1994), though some studies



have estimated that as much as 68% of the AIAN population should be classified as urban (Burhansstipanov, 2000). The 1976 Indian Health Care Improvement Act's Title V addressed health services for the urban AIAN population (Burhansstipanov, 2000), but funding for urban health services continues to be severely limited (Baldwin et al., 2002). Urban AIAN populations face very different health care access issues from their rural counterparts, and should be treated as a unique population. Despite the fact that more than one-half of the AIAN population lives in urban areas, only 2% of the annual IHS budget goes towards funding for urban health care services (Baldwin et al., 2002). In fact, Phoenix, AZ, Oklahoma City, OK, and Anchorage, AK are three of the only major urban areas with IHS clinics or hospitals (Baldwin et al., 2002). Nationwide, there are 34 individual urban health programs in 19 states, but many only provide referral services and health education, not medical care (Baldwin et al., 2002; Burhansstipanov, 2000). In Colorado, 43% of the AIAN population lives in Denver, but the nearest IHS facility is 390 miles away in a rural corner of the state (Burhansstipanov, 2000). Meanwhile, the state of California does not have any IHS facilities that provide anything more than referral services, despite Los Angeles having the largest urban AIAN population in the nation, some 45,500 individuals representing over 250 tribes (Burhansstipanov, 2000). While tribally-run clinics funded through the IHS may exist in such regions, only IHS-managed clinics are guaranteed to extend care universally to any IHS-eligible individuals; some tribally-managed services may only extend care to individuals with specific tribal affiliations or to those who live in specific geographical regions (Cunningham, 1993). Obviously, in urban areas such as Los Angeles, a tribally-managed clinic would be unlikely to provide for the health needs of the diverse AIAN population. Notably, hospitalizations thought to be preventable with access to ambulatory care are twice as high for AIANs as for all other Californians (Korenbrodt, Ehlers, & Crouch, 2003).

Many tribes have fought to restrict funding to urban IHS programs due to fears of reduction of care at rural IHS clinics if resources are reallocated (Grossman, Krieger, Sugarman, & Forquera, 1994). However, there have been ongoing calls to not only increase funding to urban AIAN health services, but also to overhaul the federal IHS system with an increased presence from urban representatives at the federal headquarters (Burhansstipanov, 2000). Given the lack of IHS services available in urban areas, it is not surprising that only about 10% of urban AIANs report using IHS health care services (Burhansstipanov, 2000).

#### **4.3 SUBSTANCE ABUSE CONCERNS AMONG URBAN AIAN POPULATIONS**

Of the IHS funding that is allotted for urban health, a full one-half goes specifically for alcohol and drug prevention, control, or treatment programs (Burhansstipanov, 2000). While this leaves little money for other health care services, the importance of such programs is apparent: injuries and alcohol-related deaths cause most excess deaths among AIAN populations (Grossman, Krieger, Sugarman, & Forquera, 1994). Also, AIANs are much more likely than any other racial group in urban regions to be hospitalized with stab wounds, bites, or blunt trauma while also having a blood-alcohol content over 0.1% (Sugarman & Grossman, 1996). In fact, one study at an urban trauma clinic in Washington found that AIAN admissions were much more likely than either African American or white admissions to have high blood-alcohol contents not only at 0.1%, but also at 0.3% (Sugarman & Grossman, 1996). Given the strong correlation between alcohol use and trauma in the urban AIAN population, it is understandable that such a significant portion of the IHS urban budget goes to substance abuse treatment (Sugarman & Grossman, 1996).

#### **4.4 SOCIO-ECONOMIC CONCERNS FOR URBAN AIAN POPULATIONS**

Other issues of concern in the urban AIAN population include high levels of poverty and uninsured rates. In urban areas, 44% of the AIAN population works in high-poverty job classifications, as opposed to 28% of the urban white population (Probst, Moore, Glover, & Samuels, 2004). Meanwhile, in one study of urban AIANs, 90.4% listed Medicaid as their primary payer, with the next highest population proportion being 78.9% among African Americans (Sugarman & Grossman, 1996). Another study found that 70% of AIAN hospitalizations were paid for by Medicaid or other “non-insurance” sources, as opposed to 40% of all non-AIAN hospitalizations (Korenbrod, Ehlers, & Crouch, 2003). For urban AIAN populations, lack of adequate health insurance compounded by a lack of IHS health care services severely limits accessibility to the regular health care services provided to many rural AIAN populations.

#### **4.5 RACIAL MISCLASSIFICATION OF AIAN IN URBAN REGIONS**

It is difficult to characterize the health care experience of the urban AIAN population due to a lack of data (Baldwin et al., 2002; Grossman, Krieger, Sugarman, & Forquera, 1994). In 1986, the Office of Technology Assessment reported that the IHS does not collect patient information from urban programs, nor does it report statistics on urban populations; the only inclusion of urban AIAN statistics in IHS data is for national reports where state-wide data is given about regions that also include reservations (Baldwin et al., 2002; Grossman, Krieger, Sugarman, & Forquera, 1994). In most cases, IHS data almost exclusively reports on the health of the rural

AIAN population. Most data concerning the specific health of the urban population comes from studies that use data directly from one clinic or hospital, and thus cannot be generalized to the larger urban AIAN population (Baldwin et al., 2002; Grossman, Krieger, Sugarman, & Forquera, 1994). A significant source of data about urban AIAN health comes from birth and death certificates; however, urban AIANs are oftentimes misclassified into other racial groups, causing many researchers to suggest that most urban data significantly under-represents the health disparities of AIAN populations (Burhansstipanov, 2000; Grossman, Krieger, Sugarman, & Forquera, 1994; Korenbrot, Ehlers, & Crouch, 2003; Sugarman & Grossman, 1996). One study that reviewed death certificates found that a full one-third of self-identified AIANs from urban areas were racially misclassified, while only 12% of AIANs were misclassified in rural regions (Grossman, Krieger, Sugarman, & Forquera, 1994). Another study has claimed that AIANs are undercounted by 38% nationwide, perhaps even more so in urban areas (Burhansstipanov, 2000). There does seem to be some indication that health statistics for urban AIANs are similar to those of urban African Americans, and similar levels of focused health intervention may be appropriate (Grossman, Krieger, Sugarman, & Forquera, 1994), though further research would be needed to generalize this theory to other urban settings.

When considering urban AIAN health issues, perhaps most frustrating is the inconsistent pattern of health status and access differences between urban and rural AIAN populations (Grossman, Krieger, Sugarman, & Forquera, 1994). Urban AIAN have higher prevalence of Hepatitis A and B, as well as tuberculosis, than rural AIAN (Grossman, Krieger, Sugarman, & Forquera, 1994), while other studies show rural AIAN to have lower rates of preventative medical care than their urban counterparts (Johnson, Call, & Blewett, 2010). Urban AIAN also have much higher rates of STDs than urban whites, but this cannot be compared to rural AIAN

populations, because STD data has not been collected for the rural AIAN population (Grossman, Krieger, Sugarman, & Forquera, 1994). Lack of solid data combined with very different sources of health care makes it very difficult to determine which, if either, group has the more beneficial health care experience.

## **5.0     PRENATAL CARE AS A COMPARISON OF HEALTH CARE ACCESS**

### **5.1     CURRENT RESEARCH IN AIAN PRENATAL HEALTH**

There have been very few studies that have attempted to compare the health care access and consequent health status of urban and rural AIAN populations. One of the few areas where data exists is in the study of prenatal health care and consequent health outcomes. While cultural differences in prenatal beliefs and practices exist, these often vary between tribes and would be impossible to characterize for the national AIAN population (Cesario, 2001). A few different studies exist that have examined prenatal care and/or birth outcomes among urban and rural AIANs. These studies used multiple methods of data collection, including IHS records and nationally linked birth and death certificates, to follow infant mortality trends. In most cases, prenatal care and infant mortality were significantly worse than the white population, often mirroring statistics seen for African American populations (Baldwin et al., 2002). Both rural and urban AIAN were found to be 2-3.6 times more likely to receive inadequate prenatal care than whites (Baldwin et al., 2002; Johnson, Call, & Blewett, 2010), but studies show conflicting data as to whether the urban (Grossman, Krieger, Sugarman, & Forquera, 1994) or rural (Probst, Moore, Glover, & Samuels, 2004) AIAN population is more likely to receive inadequate prenatal care.

## 5.2 PRENATAL CARE PATTERNS

From 1989 to 1991, 51% of all AIAN births were to rural residents, while 49% were to urban residents (Baldwin et al., 2002). Of all of these births, one-half were to unmarried women (Baldwin et al., 2002). Rural and urban AIAN populations share a similar prenatal risk profile, with high risk of adolescent pregnancies, single marital status, and alcohol or tobacco use during pregnancy (Grossman, Krieger, Sugarman, & Forquera, 1994). For *Healthy People 2010*, the baseline proportion of AIANs with adequate prenatal care was 57%, compared with 79% for whites (Johnson, Call, & Blewett, 2010). From 1990 to 1998, prenatal care among AIAN women did increase from 58% to 69%, but this was still well below that of white populations (Johnson, Call, & Blewett, 2010). Interestingly, studies have found large fluctuations in the adequacy of prenatal care provided by different IHS service regions (Baldwin et al., 2002; Johnson, Call, & Blewett, 2010). In some regions, prenatal care through the IHS was significantly better than urban counterparts, while other regions were significantly less adequate than the urban statistics; this suggests that IHS care and health statistics may need to be examined on a regional level instead of system-wide (Baldwin et al., 2002; Johnson, Call, & Blewett, 2010). Regional examination of prenatal care might also allow for recognition of variations in cultural practices (Cesario, 2001) that could be contributing to differences in utilization levels. It has been noted that fluctuations in prenatal care patterns among rural AIAN populations may be due to longer travel distances and reduced access to transportation in some regions (Baldwin et al., 2002; Johnson, Call, & Blewett, 2010), while the significantly high levels of prenatal care in other rural regions reflect the comprehensive services offered by the IHS that are inaccessible to urban residents who predominantly receive care from non-IHS providers (Grossman, Krieger, Sugarman, & Forquera, 1994).

### **5.3 BIRTH OUTCOMES AND INFANT MORTALITY**

In addition to following prenatal care patterns, birth outcomes and infant mortality have also been studied among urban and rural AIAN populations. Infant mortality reported through the IHS has dropped from 62.7 per 1,000 live births in the year 1955 to 8.7 per 1,000 live births in 1993 (Baldwin et al., 2002). However, this is still much higher than the U.S. statistic of 5.3 per 1,000 in the same year (Baldwin et al., 2002). Additionally, among AIAN populations, post neonatal death rates, infant deaths occurring between 28 days and 1 year of life, are more than twice the rate of white populations, with most deaths being attributed to preventable causes (Baldwin et al., 2002). It has also been suggested that misclassification of race on death certificates has led to underestimates in the AIAN infant mortality rate nationwide (Baldwin et al., 2002).

While both urban and rural AIAN populations struggle to receive adequate prenatal care and suffer higher infant mortality rates than the general U.S. population, there are differences in the birth outcomes between the two populations. While one study found rural AIANs to be more likely to have inadequate prenatal care, urban AIANs were much more likely to have low-birth weight babies (Baldwin et al., 2002). Additionally, urban AIANs were more likely to have high-risk pregnancy factors including single marital status and being a smoker, while rural AIANs were more likely to enter a pregnancy with pre-existing medical conditions or previous pregnancy complications (Baldwin et al., 2002). In the post neonatal period, rural infants were more likely to die of infectious disease or unintentional injury than urban infants (Baldwin et al., 2002). Given the lack of consistent prenatal care services available to these populations, differences in birth outcomes suggest that factors other than prenatal care are contributing to the birth outcomes for rural and urban AIANs (Baldwin et al., 2002). Such statistics also illuminate



another issue in the current understanding of AIAN health disparities: while data is often available on the national level by race and ethnicity, the disparities fluctuate regionally due to environmental and cultural differences affecting access (Baldwin et al., 2002; Cesario, 2001; Johnson, Call, & Blewett, 2010). Without examining smaller service regions, there can be little understanding of the true barriers that must be addressed for increased access. Additional study of these health concerns with more complete data would lead to much more definitive examples of the effect prenatal care access has on birth outcomes among the AIAN population.

#### **5.4 CULTURAL CONSIDERATIONS**

Besides regional differences in facility availability and patient access, cultural differences often lead to decreased utilization of prenatal care services for many AIAN women. In many tribal traditions, the discussion of negative health consequences, potential or otherwise, is taboo (Carrese & Rhodes, 2000). In such instances, prenatal care is viewed as bringing unwelcome focus on potential negative outcomes, and in some circumstances, even seen to increase the likelihood of harm to the mother or child. In such cases, access is not the issue so much as culturally competent care and the willingness of patients to utilize this care (Cesario, 2001). Many clinics have made great strides in increasing the cultural competence of their medical staff, often hiring native staff who are members of the local tribes (Baldwin et al., 2008). However, some aspects of Western medicine, regardless of staff cultural competence, simply go against traditional beliefs of certain tribes (Carrese & Rhodes, 2000). In these cases, additional work must be done to bridge the gap between providing adequate care while remaining within cultural bounds.

## **6.0 AIAN VETERANS**

### **6.1 OVERVIEW OF AIAN VETERAN HEALTH**

One of the unique sub-populations of AIANs is the veteran population. While AIANs comprise 1% of the U.S. population, they have the highest proportion of military personnel of any race or ethnicity (Kramer et al., 2009b); this is especially true of forward combat units (Kramer et al., 2009a). Of the AIAN veteran population, 97.3% live in the 35 states where IHS services exist (Kramer et al., 2009b). As neither the IHS nor the Veterans' Health Administration (VHA) are exclusive health providers, many AIAN veterans choose to utilize care from both systems. The typical AIAN veteran who uses VHA services tends to have served during wartime (most often Vietnam), and 42.2% have a service-connected injury or illness (Kramer et al., 2009b). In February of 2003, a Memorandum of Understanding (MOU) was developed between the IHS and VHA for the purpose of improving health care access and outcomes for AIAN veterans by encouraging cooperation and resource sharing between the two organizations (Kramer et al., 2009b; Kramer et al., 2009a). While not an official service agreement, this MOU served as a much needed step forward in care for AIAN veterans by acknowledging the unique challenges of caring for patients who were often treated by two different health systems, and committing to increased cooperation and communication between the VHA and IHS. The AIAN veteran population reports unmet health care needs at four times the rate of white veterans, despite the

fact that these AIANs are presumably eligible for two separate health care systems (Kramer et al., 2009a). At the same time, AIAN veterans experience higher rates of prevalence and more severe forms of post-traumatic stress disorder (PTSD) than their white cohort, as well as experiencing other unmet health needs (Kramer et al., 2009b), showing a need for increased care for this population.

## **6.2 DUAL CARE THROUGH THE VHA AND IHS**

Both a strength and a weakness of this dual system of care for AIAN veterans is the fact that the IHS and VHA function differently. While this can lead to significant confusion and frustration for patients and providers trying to understand eligibility rules, it can also lead to increased access to care for those who understand how to use the best of each system. The VHA has a “standard package” of health services offered to all veterans, with additional services or reduced co-pays provided based on eligibility levels (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). This differs from the IHS, which provides the exact same services to all AIANs at no cost. Also, the VHA’s funding is based on work-load, making it significantly better funded than the annual Congressional allocations to the IHS system; because of this, the VHA is able to offer specialty services at more locations than the often limited services provided by the IHS (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). Unlike the IHS’s free provision of any needed healthcare to all eligible AIANs, the VHA provides free or low-cost care for veterans using a variable co-pay scale based on a variety of factors including income and service-connected injury/illness (SCI) (Kramer et al., 2009b; Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009; Kramer et al., 2009a). Greater provision of free and prioritized care is given to those

veterans whose health status is more greatly affected by an SCI, thus giving them a higher SCI-rating (Kramer et al., 2009a). Also, while the IHS can only provide limited specialty and inpatient services, the VHA regularly provides the broad range of services one might expect from a hospital-based program, including mental health and rehabilitative care as well as specialized diagnostics (Kramer et al., 2009b; Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). It has also been found that the goals and focus of health education and patient care in any given region are based on the specific ideologies of whichever service, VHA or IHS, is the dominant regional provider of health care services (Kramer et al., 2009b).

Though no official service agreement exists between the two organizations, resource availability has driven many AIAN veterans to independently seek dual-care (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). The overwhelming majority of dual-care patients use IHS care as their source for primary care and acute needs, while accessing VHA services for specialty care and diagnostic services (Kramer et al., 2009b; Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). Quality, cost, and customer service were all listed as factors in patients' choice of which system to use for which type of care. Another driving factor was the availability of care under the IHS, particularly when specialty services involving CHS funding were difficult to access through the IHS, but easily attained through the VHA (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). In fact, nearly all specialty care for AIAN veterans was provided by the VHA (Kramer et al., 2009a). Providers have encouraged this dual-use, with many IHS providers referring AIAN veterans to VHA services when such care is more difficult to access under the IHS (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). Along these same lines, many AIAN veterans report choosing which service to use based on the relative cost to the organization or larger community. For example, given the limited CHS funding available to each

IHS service unit, an AIAN veteran may consciously choose to access specialty care at the VHA in order to leave those funds available for another IHS patient from the same community who has no other source of health care. Likewise, the same AIAN veteran may choose to receive primary care at the IHS due to the reduced cost of transportation and smaller patient load of the local clinic over a larger VHA medical center (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009).

Overall, approximately one-quarter of those veterans who use IHS care also use VHA care (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). Interestingly, veterans who used VHA services had significantly higher rates of utilization of all forms of health care than those veterans who only received care through the IHS (Kramer et al., 2009a). It has also been shown that services present in hospital-based clinics, such as those commonly found in the VHA system, increase delivery of outpatient care, thus leading patients to also increase their use of IHS services (Kramer et al., 2009b). While many AIAN veterans concurrently receive care from both systems, less than one-fifth of the patients used both systems for the treatment of the same condition (Kramer et al., 2009b). However, it should be noted that the diagnosis of the same chronic diseases, namely diabetes, hypertension, and cardiovascular disease, was often reported by both services (Kramer et al., 2009b). Those with more complex medical conditions were five times more likely to visit the VHA than those seeking basic care (Kramer et al., 2009b). Given the lack of IHS services in most urban areas, it should not be surprising that VHA use increased for those who lived in metropolitan regions, were seeking mental health services, or had a high SCI rating. Conversely, those who had IHS services available in-state were less likely to seek VHA care (Kramer et al., 2009b).

### **6.3 BARRIERS TO ACCESS WITH DUAL CARE**

While many veterans and providers alike report that dual care under both the VHA and IHS is both common and beneficial, significant barriers to quality care exist under such conditions. In most regions, there is no official service agreement between the IHS and VHA, and therefore no organized cooperation between the two systems (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). Without strong communication and a primary source of care, patients may have less desirable health outcomes due to a lack of accountability, overlaps in care, and conflicts in treatment plans between the two systems (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). One of the greatest difficulties is the lack of sharing of medical records. As already stated, many AIAN veterans receive primary care services from IHS providers then seek out specialty or diagnostic services from VHA providers, sometimes at the encouragement of their IHS physicians. However, it is not regular practice to share medical records between the two systems, and unless a patient specifically asks for their record to be sent to the other facility, each facility is working without any knowledge of the other providers' plans (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). At the very least, this can lead to longer patient visits, as primary care exams and medical histories must be repeated by each system. However, such lack of communication can also have detrimental effects on the patient's health, particularly when the treatment plan of one provider conflicts with that of the other (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). The most common example of this conflict is seen with long-term management of diabetes. Providers from both the IHS and VHA noted that patients who were more actively engaged in their health better managed the conflicts between the two systems, but also acknowledged that significant health decisions were often left to the patient's unassisted discretion when providers unknowingly disagreed on treatment plans (Kramer,

Vivrette, Satter, Jouldjian, & McDonald, 2009). It should be noted that while some AIAN veterans appreciated their IHS providers referring them to VHA services, others felt that it showed a lack of expertise and knowledge among the IHS providers (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009).

Another barrier to quality dual care is due to the differences between the two systems. As previously established, the VHA and IHS are constructed differently in their eligibility and care models. IHS providers do not always understand that all VHA care is not automatically available to all patients; referring AIAN veterans to the VHA for expensive or IHS-inaccessible services is considered effective cost containment and good medicine among many IHS physicians (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). However, due to this lack of knowledge, providers may refer their patients to VHA care, or in an emergency, actually provide them with VHA services, only to later discover that the patient was ineligible for such treatment (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). VHA providers acknowledged that AIAN veterans are quite active in choosing which health care system will best serve their needs for any given situation, but noted that IHS providers would better serve their patients by understanding the differential eligibility of the VHA system (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). While IHS providers were noted as needing more understanding of the VHA system, VHA providers were reported to be less than competent when it came to the tribal customs and health behaviors of their AIAN patients (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). Additional cultural training for VHA providers was noted to be just as important as VHA eligibility education for IHS providers (Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). Providers of both systems worried that the VHA does not actively seek to engage its eligible AIAN population due to the increased demands and costs of treating additional patients (Kramer,

Vivrette, Satter, Jouldjian, & McDonald, 2009). If the VHA were to improve its services to AIAN patients, it must actively work to better educate its staff and reach out to AIAN veterans in need of quality healthcare.

#### **6.4 FEMALE AIAN VETERANS**

Within the subpopulation of AIAN veterans, an even smaller group exists: female AIAN veterans. It is expected that by the year 2010, 14% of all VHA beneficiaries will be female; an increase from only 6.25% of all beneficiaries being female in 2003 (Kramer et al., 2009a). Given the significant proportion of AIAN in military service, female AIAN veterans are increasing in number. Female veterans are more likely to be young, better educated, and a member of a racial or ethnic minority group than their male counterparts (Kramer et al., 2009a). Among all AIAN veterans, there is an increased prevalence and severity of PTSD; female AIAN veterans are twice as likely as male AIAN veterans to suffer from this illness (Kramer et al., 2009a). Female AIANs are already more likely to suffer higher rates of heart disease, diabetes, alcohol related deaths, and other diseases than white women. The three most common diagnoses for female AIAN veterans are diabetes, hypertension, and depression (Kramer et al., 2009a). Moreover, 23.3% of AIAN female veteran stays at VHA facilities are for psychiatric care (Kramer et al., 2009a). While rates of many diseases among AIAN female veterans are similar to the rates of other female veterans, there is concern that these women may not be receiving the same care. Despite the efforts of the VHA to provide for the needs of their female patients, AIAN female veterans tend to be clustered in different states than the majority of other female veterans. Some studies have noted that outreach specifically designed to target female veterans may not be taking place



in regions where AIAN veterans reside, thus leaving female AIAN veterans untreated at higher levels than other female veterans (Kramer et al., 2009a). As with the larger interactions between the IHS and VHA, specific focus must be placed on the needs of female AIAN veterans if health outcomes are to be improved for this population.

## **7.0 PREVENTATIVE HEALTH AND SPECIAL HEALTH CONCERNS**

### **7.1 CANCER SCREENING**

Cancer screenings are also an area of interest in AIAN health care. Specifically for women, mammography has received significant attention for early cancer detection and treatment, but the IHS only has a total of 14 mammography machines in all of its clinics nationwide (Burhansstipanov, 2000). Until only a few decades ago, cancer was not a significant health concern for AIAN populations. However, in recent years, cancer rates have been steadily climbing, while positive health outcomes for AIAN cancer patients remain well below national rates (Guadagnolo et al., 2009). Increasing detection rates, particularly through mammography, has been a strong focus of community intervention. Issues of rural access and patient awareness have both contributed to low test rates (Guadagnolo et al., 2009). However, as with prenatal care, for some tribes, screenings for diseases a patient does not currently have contributes to the cultural taboo of discussing negative information (Carrese & Rhodes, 2000). Prevention outreaches must be developed that are culturally appropriate for each tribal group, and health providers and educators must be capable of approaching such issues in culturally sensitive ways as well. In order to increase mammography screening and early cancer detection, the IHS must make screening services more widely accessible.

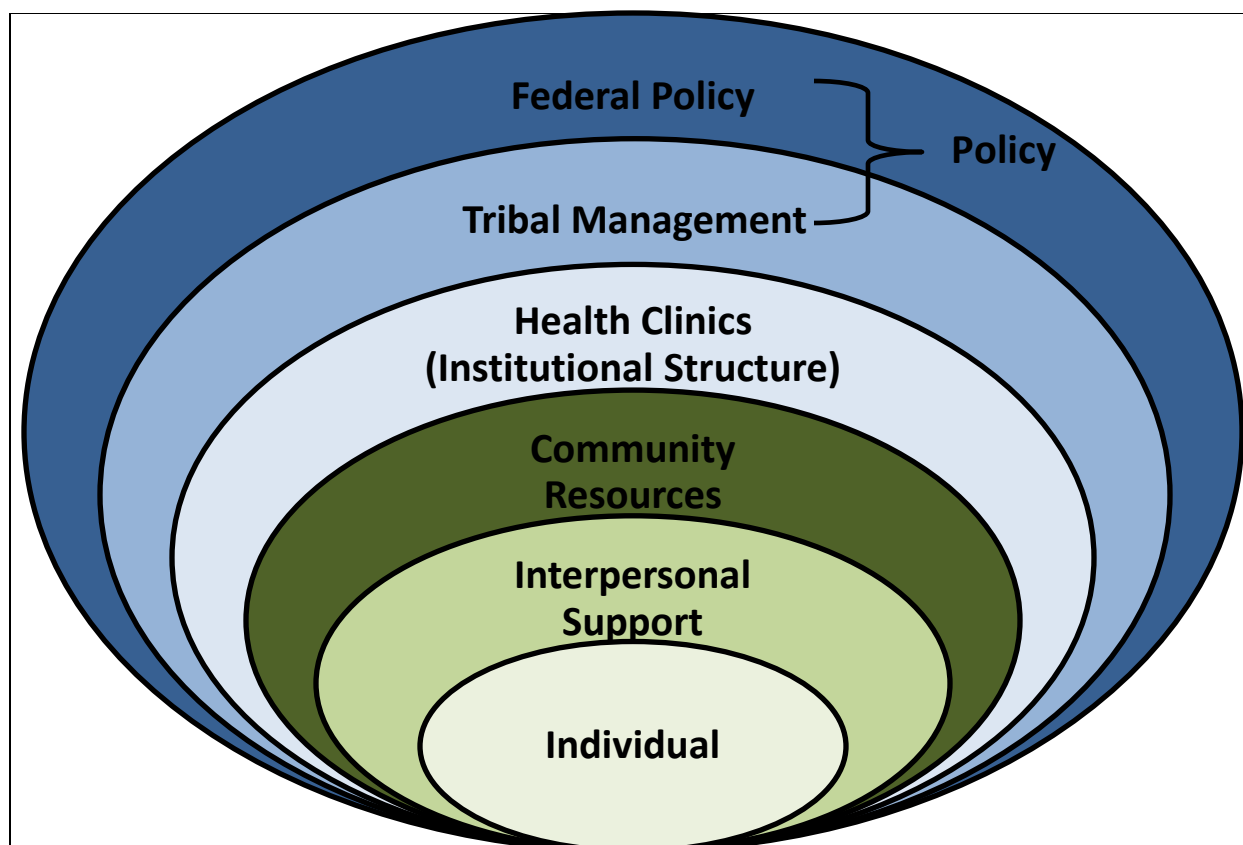
## **7.2 DIABETES**

Another area of great concern has been the high prevalence of diabetes among many AIAN communities. Significant research has been conducted in the field of diabetes screening and intervention, though most of it focuses on treatment and lifestyle program implementation (Baldwin et al., 2008; Carrese & Rhodes, 2000; Griffin, Gilhiland, Perez, Upson, & Carter, 2000; McCabe, Gohdes, Morgan, Eakin, & Schmitt, 2006; McCabe et al., 2003). The most common issue of access discussed in this field of research has been the translation of diabetes terminology into easily understandable definitions that can be used in treatment discussions with AIAN patients (McCabe et al., 2003). Another concern has been the cultural appropriateness of discussing negative diagnostic information with patients from tribal cultures that avoid discussion of negative consequences (Carrese & Rhodes, 2000). However, most of the work completed in this field has been with small populations from one tribe or community. Generalizations of these interventions and outcomes to other regions or tribes would be difficult until further research has been completed.

## **8.0 THE SOCIAL ECOLOGICAL MODEL AS IT PERTAINS TO AIAN HEALTH CARE ACCESS BARRIERS**

### **8.1 THEORETICAL FRAMEWORK**

The Social Ecological Model, originally proposed by McLeroy in 1988, approaches the understanding of health concepts through five interrelated levels of involvement: individual, interpersonal, institutional, community, and policy (McLeroy, Bibeau, Steckler, & Glanz, 1988). At each level, factors exist that have an effect on health outcome or can be used as a point of intervention to improve desired health outcomes (McLeroy, Bibeau, Steckler, & Glanz, 1988). When examining the complex issues of health care access, many levels of influence affect the ability of an individual patient to both have access to and utilize health care services. This multifaceted approach to access is especially true for the AIAN population. As seen in Figure 1, by using the Social Ecological Model as a framework for understanding the various levels of influence, it becomes evident that access to care is affected by many different powers. Federal and tribal governments comprise the policy level. In the case of AIAN health care, institutions, namely health clinics, serve on a larger, macro level than community resources. On a micro level, community resources, interpersonal support, and individual resources all contribute to health care access.



**Figure 1.** The Social Ecological Model as it pertains to AIAN health care access barriers

## 8.2 FEDERAL POLICY

At the macro level, political influences, both by the federal government and tribal governments, have an effect on access to care. For the federal government, some of this influence is historical, such as the policies that pushed many AIANs away from reservation communities into urban regions where IHS services were unavailable (Burhansstipanov, 2000). Other historical influences by the federal government have included the initial development of the IHS, as well as revisions to the scope and focus of IHS care through multiple Acts and Amendments

(Cunningham, 1993; Korenbrot, Ehlers, & Crouch, 2003; Roubideaux, 2002). Currently, the federal government continues to affect access to health care through the Congressional power over the IHS annual budget and distribution of Medicaid and Medicare funding for eligible AIAN patients (Cunningham, 1993; Cunningham & Cornelius, 1995; Roubideaux, 2002). For the AIAN population nationwide, it could be argued that increased support and funding from the federal government would cause a chain reaction of increased access through increased resource availability.

### **8.3 TRIBAL GOVERNMENT (POLICY)**

For tribal governments, influence over health care access has continued to grow as more power over IHS management has been given to individual tribes (Roubideaux, 2002). First and foremost, tribal governments have the ability to decide who is eligible for IHS care based on blood relationship to the tribe, and in some cases, residency status (Cunningham, 1993; Trafzer & Weiner, 2001). Many tribal governments have also assumed the power to manage the IHS clinics within their jurisdiction, giving them authority over budget distributions and local availability of health services (Roubideaux, 2002). For many urban AIAN populations, it is at this level that the majority of barriers towards health care access exist. When tribal authorities limit eligibility by residence on a reservation or by restricting funding for urban health programs, the access to health care for urban AIAN populations severely decreases (Cunningham, 1993). Unless many tribal governments revise their stance on IHS eligibility, either through blood quotient status or residency, health care access through the IHS will continue to be severely curtailed to a significant portion of the nation's AIAN population.

#### **8.4 HEALTH CLINICS (INSTITUTIONS)**

The health clinics themselves control what services are provided to the patient population, as well as how geographically accessible these services will be to the target population. While tribally-managed facilities have their accessibility determined in large part by tribal government decisions, there are some factors of access that could be improved on this level. First and foremost, geographic accessibility can be improved through a more even distribution of IHS services around the nation. Increased clinics in urban areas would significantly improve access to health care services for urban AIAN populations (Burhansstipanov, 2000). Additionally, distribution of specialty care clinics in rural regions would ease the difficulty of attaining CHS funding for specialty care (Baldwin et al., 2008) as well as decrease the burden of travelling long distances for contract care at non-IHS facilities (Cunningham & Cornelius, 1995). Health clinics are also responsible for the providers who work in these clinics; by ensuring that staff members provide both quality and culturally competent medical care to all patients, cultural accessibility to care would also be improved (Carrese & Rhodes, 2000; Cesario, 2001; Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009). Another significant change at this level would be the standardization of care across clinics. Inconsistent prenatal care rates and birth outcomes across the national IHS system are an excellent example of the need for standardized levels of care and access to be enacted (Baldwin et al., 2002; Johnson, Call, & Blewett, 2010). While many changes that occur in health clinics must receive support or approval from policy-level sources, these institutions can initiate change by drawing attention where improvement is possible and making small-scale changes to improve patient access while petitioning for larger, universal changes.

## **8.5 COMMUNITY RESOURCES**

Additional barriers to access exist at the micro level. For rural communities, the socioeconomic environment may lead to poor or non-existent transportation services or impassable roads (Baldwin et al., 2008; Grossman, Krieger, Sugarman, & Forquera, 1994; Probst, Moore, Glover, & Samuels, 2004). Community size also affects the ability of the region to support an adequately sized medical staff or specialty services (Cunningham & Cornelius, 1995). In urban communities, lack of tribal structure may prevent individual AIANs from procuring the same IHS care they might receive on reservation lands (Burhansstipanov, 2000; Cunningham, 1993). Additionally, urban AIANs may not even be properly identified as members of the AIAN population, thus leading to long-term misrepresentation of the population's health status and ongoing care needs (Burhansstipanov, 2000; Grossman, Krieger, Sugarman, & Forquera, 1994; Korenbrot, Ehlers, & Crouch, 2003; Sugarman & Grossman, 1996). Socio-economic development of impoverished communities can lead to better health accessibility and outcomes simply by providing the community with more resources through which health care can be accessed (Probst, Moore, Glover, & Samuels, 2004). Additionally, stronger representation of the urban AIAN population can lead to increased funding allocations to urban regions as well as increase recognition of the unique health needs of this population (Burhansstipanov, 2000).



## **8.6 INTERPERSONAL**

While not deeply discussed in this paper, interpersonal and individual influences also affect access to care, though more so through utilization of care. The support of friends and family can strongly affect the health outcomes of individuals when they are in need of significant health care intervention (Cunningham & Cornelius, 1995). In urban areas, the interaction and cooperation of individuals from different tribes could lead to greater demand for recognition of urban AIAN health needs (Burhansstipanov, 2000). Additionally, improved racial classification by providers will lead to better documentation of AIAN health disparities while illuminating issues where intervention is most needed (Burhansstipanov, 2000; Grossman, Krieger, Sugarman, & Forquera, 1994; Korenbrot, Ehlers, & Crouch, 2003; Sugarman & Grossman, 1996).

## **8.7 INDIVIDUAL**

While individual factors in health care access and health outcomes were only briefly mentioned in this paper, many studies on specific disease interventions, particularly diabetes, have shown significant changes in health care utilization through changes at the individual level, leading not only to increased utilization of care, but healthier lifestyle behaviors (Baldwin et al., 2008; Carrese & Rhodes, 2000; Griffin, Gilhiland, Perez, Upson, & Carter, 2000; McCabe, Gohdes, Morgan, Eakin, & Schmitt, 2006; McCabe et al., 2003). Substance abuse, a strong factor in hospital admissions among urban AIAN populations, could also be approached through interventions focused on changing individual behaviors (Sugarman & Grossman, 1996).

Substance abuse interventions used with other urban minority populations may serve as a starting point for developing effective programs for similar urban AIAN populations (Grossman, Krieger, Sugarman, & Forquera, 1994). Prenatal care and birth outcomes are another area where individual change could be enacted. By decreasing high-risk factors that are commonly found among pregnant AIAN populations such as smoking during pregnancy, improvements to infant mortality rates in this population would be possible (Baldwin et al., 2002).

## **9.0 CONCLUSION**

Health care access for the AIAN population is a multi-level issue with many conflicting interests. Current and historical involvement by the federal government has led to multiple policies that have destroyed tribal culture, moved people from native lands, and then developed an underfunded program in an attempt to repair the health of this people group (Burhansstipanov, 2000; Cunningham, 1993; Cunningham & Cornelius, 1995; Korenbrot, Ehlers, & Crouch, 2003; Roubideaux, 2002). Tribal structure of AIAN groups has been severely affected by long-term interference from governmental and non-Native sources; efforts to reclaim tribal identity have both helped and hindered the efforts to provide health care. While many tribal governments have been given the authority to manage the clinics in their reservation communities, this has also caused the exclusion of health care services from those who are not recognized as eligible by the tribe's specific standards (Cunningham, 1993; Trafzer & Weiner, 2001).

Certain groups within the larger AIAN population have specific barriers to accessing health care. For the rural AIAN population, extreme poverty and resource rationing often make it difficult for patients to access the health care services available. Transportation is particularly difficult in regions without a public transportation system and bad roads (Cunningham & Cornelius, 1995).

For the urban AIAN population, geographic access to IHS care is rare, while poverty, violence, and other issues commonly associated with minority urban populations prevent regular

access to other sources of care (Burhansstipanov, 2000; Grossman, Krieger, Sugarman, & Forquera, 1994; Probst, Moore, Glover, & Samuels, 2004; Sugarman & Grossman, 1996).

For veterans, dual eligibility under the IHS and VHA systems has led to high rates of utilization, but patients are often ill-equipped to manage their health care in order to best access the health care services offered to them (Kramer et al., 2009b; Kramer, Vivrette, Satter, Jouldjian, & McDonald, 2009).

Preventative services, such as adequate access to mammography services, are severely lacking in many IHS service regions, while rates of cancer are quickly increasing among AIAN populations (Burhansstipanov, 2000; Guadagnolo et al., 2009).

If changes to the health disparities experienced by AIAN populations are to occur, changes to the current system of health care access must be made. First and foremost, research must be more comprehensive and accurate in order to provide a clear picture of the current health status of AIAN populations. Research needs to expand beyond the current focus on characterizing specific health disparities and begin to examine the underlying causes of these disparities as well as developing interventions to address these issues. Data collection on the health status of the AIAN population needs to include all individuals classified as AIAN, not just patients receiving care from the IHS or living on reservation lands. Improved racial classification will provide more accurate statistics, while better linking of health records between IHS, VHA, and other health systems will show correlations between issues of access and health outcomes. Funding must also be expanded, both to better equip current IHS services, and to expand services to urban AIAN populations. Additionally, economic development of rural regions will directly improve health status while also providing resources so that individuals are better able to independently access health care services (Probst, Moore, Glover, & Samuels, 2004). Extending

eligibility to those AIAN not currently covered under IHS services may also serve to provide increased access to those AIANs who are unable to find regular sources of ambulatory care. While funding changes can provide short-term improvements to health care access, until the access barriers and resultant health disparities are better understood, little directed intervention can be used to achieve positive long-term health changes for the AIAN population.

AIAN populations experience some of the worst health statuses of any racial group in the United States. While improved access to health care will increase the health indicators of the AIAN population, it is unlikely to completely erase the disparities experienced by this group. Even in regions where IHS services provide health care access at levels much higher than the general U.S. population, AIANs often suffer worse than average health outcomes due to socioeconomic disparities, culturally incompetent health care, and other currently unrecognized factors. By improving health care access to AIAN populations, health disparities may be improved to be equal to those faced by other minority groups. However, significant changes to the health outcomes of this population will not be seen until considerable research and subsequent interventions have been conducted that not only recognize the interconnection between multiple health disparities, but also examine and address the many underlying barriers to accessibility that contribute to the struggle for health within the AIAN population nationwide.

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